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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,920

10/20/2003

Masahiro Maeda

Q78073

8344

23373

7590

12/20/2004

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EXAMINER

CHEN, SOPHIA S

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/687,920	MAEDA ET AL	
	Examiner	Art Unit	
	Sophia S. Chen	2852	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.                                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/19/04</u> .                                                             | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Ex parte Quayle*

1. This application is in condition for allowance except for the following formal matters:

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 11, 80, 81, 83, F (Figure 1), 21c (Figures 2B, 4B, 6B, and 8B), 22d (Figures 2C, 2D, 4C, 4D, 6C, and 8C), and 22c4' (Figure 2D). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

***Allowable Subject Matter***

3. Claims 1-5 are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter: Claim 1 is allowable over the prior art of record because the prior art of record does not teach or suggest an image forming apparatus comprising an aperture rate of a first part of the bottom face corresponding to the vent aperture on the side face in an axial direction of the charger is lower than an aperture rate of a second part of the bottom face, in combination with the remaining claimed limitations.

Claim 2 is allowable over the prior art of record because the prior art of record does not teach or suggest an image forming apparatus comprising a grid aperture rate of a first part of the grid corresponding to the vent aperture in an axial direction of the charger is higher than a grid aperture rate of a second part of the grid, in combination with the remaining claimed limitations.

Claim 3 is allowable over the prior art of record because the prior art of record does not teach or suggest an image forming apparatus comprising an insulating sheet is applied to an outer face of the back plate so as to cover a portion of the aperture while

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leaving another portion of the aperture uncover, in combination with the remaining claimed limitations.

Claim 4 is allowable over the prior art of record because the prior art of record does not teach or suggest an image forming apparatus comprising an insulating sheet extending in an axial direction of the charger with a width substantially equal to a width of the vent aperture is applied to an inner surface of the side face on which the vent aperture is not formed, in combination with the remaining claimed limitations.

#### ***Citation of Pertinent Prior Art***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tagawa et al. (US Pat. No. 4,745,282) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; and airflow is provided along the back plate.

Takeda et al. (US Pat. No. 4,922,303) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; vent apertures being on a side face and bottom face of the back plate; and an airflow is provided along the back plate.

Myochin et al. (US Pat. No. 5,018,045) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; and airflow is provided along the back plate.

DeCecca (US Pat. No. 5,291,247) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; an airflow is provided along the back plate; and the aperture rate of the bottom face of the back plate being different.

Takafuji et al. (US Pat. No. 5,351,111) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode, a grid plate, and a back plate; and two different grid aperture rates.

Koshimura et al. (US Pat. No. 5,742,874) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; and airflow is provided along the back plate.

Ogasawara (US Pat. No. 6,411,788 B1) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; and an airflow is provided along the back plate.

Sato et al. (JP 05-0974076 A) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode, a grid plate, and a back plate; and the grid plate containing different sizes of grid holes.

Yoshino et al. (JP 06-236096 A) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; and airflow is provided along the back plate.

Tokimatsu et al. (JP 08-171254 A) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back

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plate; vent apertures being on a side face and bottom face of the back plate; and an airflow is provided along the back plate.

Nemoto et al. (JP 09-230668 A) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; an airflow is provided along the back plate; and the bottom face of the back plate containing different sizes of apertures.

Ishida et al. (JP 10-142900 A) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; and airflow is provided along the back plate.

Kuribayashi (JP 11-052685 A) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; vent apertures being on a side face and bottom face of the back plate; and an airflow is provided along the back plate.

Maeda (JP 2003-241484 A) discloses an image forming apparatus comprising a photosensitive body; a charger including a discharge electrode and a back plate; and airflow is provided along the back plate.

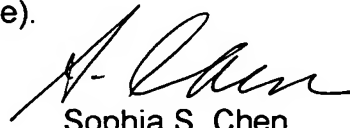
#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen  
Primary Examiner  
Art Unit 2852

Ssc  
December 15, 2004